Skeltons
Farmlands Horticultural Specialists

THE LATEST ON PRACTICES, PEOPLE & PRODUCTS FOR A GROWING INDUSTRY

HORTFOCUS

SPRING 2010

New biological growing advisory service

Consumers are increasingly becoming aware and discerning about the quality of the food they consume.

Skeltons has a specialist Biological Unit to support the increasing number of horticulturists looking to grow more sustainably.

"There is a groundswell of awareness amongst horticulturists about growing in a more natural, balanced biological way. Our aim is to help our customers incorporate the best practices and products that optimise soil and plant health and so maximise crop quality and yields," says Ian Gold, Skeltons general manager.

Todd Whiffen who was a regional coordinator with Apple Futures heads up the Unit and see its services as being "the next steps on from Apple Futures. We're much further down the track than we were in understanding how to grow in balance with nature. Working with Skeltons, I can continue to show growers positive results."

He is organising focus meetings, workshops, discussion groups and other events to share his knowledge, and that of other leaders in the field.

In addition to identifying and sourcing the latest and best biological growing practices and products to be stocked by Skeltons and Farmlands, Todd is providing specialist biological growing advice to growers across all horticulture sectors, working alongside Skeltons technical advisors.

Skeltons Biological Unit will be focusing on the Hawke's Bay and East Coast regions initially and will be based at Skeltons Hastings store.

See overleaf for more information about Todd.

Growing sustainably: New Zealand's point of difference

Recently I had the good fortune to attend a ceremony in Washington DC where Skeltons was awarded an Environmental Ambassador of Respect award for the way we conduct our business. See separate story on back page.

This was a particularly prestigious international event and I was very proud of our Skelton's team as well as being very proud to represent New Zealand as a country on this world stage.

It was apparent that within the very diverse international group at the Awards, New Zealand has a fantastic reputation as a 'clean green' producer of high quality food, and we should be doing everything within our power to protect that and to capitalise on it commercially.

There was a lot of talk of how feeding a world of nine billion people in 2050 would require three times the amount of food we are producing now. The great grain producing nations of the world will need to rise to this challenge but as a producer New Zealand's focus must be on a point of difference at the high value end of the markets.

To do this we need to be differentiated significantly from the rest. One way is to maintain the clean and green image and show we believe in it and are leading it.

That is why we have invested in Skeltons biological growing unit: to help our customers grow the type of food the discerning international consumer is demanding. Sustainably produced, nil to low-reside produce can be our New Zealand point of difference and we must continually refine and expand on this theme to stay in front.

IAN GOLD Skeltons General Manager

Blake speaks at Romeo Bragato

Skeltons Hawke's Bay viticulture technical advisor, Blake Herbison was an invited speaker at this year's Romeo Bragato national conference held in Blenheim in August.

He presented the 500 attendees with the results of three case studies of Hawke's Bay vineyards that had used organic spray products during the 2010 growing season.

From his research Blake concluded that as most organic sprays are passive (especially botryticides), they need to be applied in conjunction with good cultural practices such as canopy management and encouraging beneficial predator populations. Biological botryticides tend to struggle if followed by or applied in high-disease pressure situations.

More research needs to be carried out on the correct timing for application of biological botryticides and what factors may encourage the efficacy on the vine itself. Emphasis should be placed on good cultural control methods (ie leaf plucking, shoot/ bunch thinning) to encourage unfavourable conditions for botrytis to establish.

In some organic vineyards mealy bug is not a concern, however many growers are still vulnerable to this pest as there are limited organic spray options. Trial work is needed on beneficial plant and predators relating to this pest

In general, the effectiveness of the organic spray products is dependent on disease pressure, having healthy soil and plant, site and variety selection.

A full copy of Blake's presentation can be found on our website www.skeltons.co.nz

Sooty Mould - a growing problem in kiwifruit across North Island

It became apparent prior to the 2010 harvest that Sooty Mould had become an industry issue, particularly in the Bay of Plenty, but with high probability it will spread around the North Island. It is crucial that we identify the source of the Sooty Mould so that effective pest management strategies can be developed.

Sooty Mould can be caused by Passionvine hopper (PVH) or cicadas, and determining the main source of infestation will identify what preventative steps to take. PVH create stain patterns with mould on the tops of the fruit, while generally a cicada stain is smaller and more of a splatter on the side of the fruit.

PVH has become a serious pest of kiwifruit following the adoption of the KiwiGreen strategy that has seen the removal of most broad-spectrum insecticide sprays from kiwifruit orchards. In combination, last summer's minimal rainfall meant that honeydew remained on fruit providing the host for sooty mould growth.

No effective controls

At the time of writing, no method of Sooty Mould removal or effective PVH or cicada control has been found. Products have been promoted within the industry by some merchants to remove the honeydew or Sooty Mould however it is difficult to quantify the success of these products.

Spraying water could have similar effects by washing the honeydew off, but more importantly, preventing the honeydew from forming is critical, so start at the beginning and reduce PVH populations.

Steps for prevention

1. As the PVH eggs are embedded in the plant and so therefore protected from chemical, it is doubtful that Lime Sulphur, Hydrogen Cyanimide, Lorsban or Oils will have any effect. If host plants are present, clear them out, burning the waste to destroy the egg rafts. Disturbing host plants when adults are present may increase PVH dispersal into the orchard so timing is crucial.
2. Native bush, bracken and scrub can harbour PVH but as this can be a food source for bees take care not to spray everything with chemical. If nothing is flowering in the bush and no bees are present, a systemic (PVH are sucking insects) or a contact action spray in the undergrowth early to mid November when they are at the fluffy stage, should be effective.
3. Request that your monitoring facility records PVH numbers during KiwiGreen monitoring rounds so you can spray if thresholds are met. Currently the only insecticide option is Pyrethrum. It is suggested that you spray late in the evening, starting with the outside row first, then row four and work back to avoid pushing the PVH further into the block. This may help as the lower temperatures will tend to slow movement down. If the source of infestation is uncontrollable, repeat applications will be necessary.

For more information and advice in the battle against Sooty Mould, contact your Skeltons technical advisor.

Todd Whiffen, Biological Unit Manager

Todd has worked in horticulture for 17 years in both 'hands on' and consultancy roles. He worked for Tullamain Orchard in Hawke's Bay, a property recognised as a benchmark for the industry, for four years. During this time he was closely involved in Tullamain's early conversion to IFP and then to organic growing regimes.

Prior to his time with Apple Futures, Todd worked with Fruition Horticulture as the manager of its irrigation monitoring service which became the largest in the North Island under his care. He holds a Diploma in Horticulture and another in Agricultural Business Management.

Todd Whiffen

027 457 2697

Prevention strategies for Powdery mildew in vines

Powdery mildew (Uncinula necator) is one of the most devastating diseases affecting vine growth and fruit quality in the wine industry. Last season was particularly bad in many regions with most vineyards having varying degrees of infection.

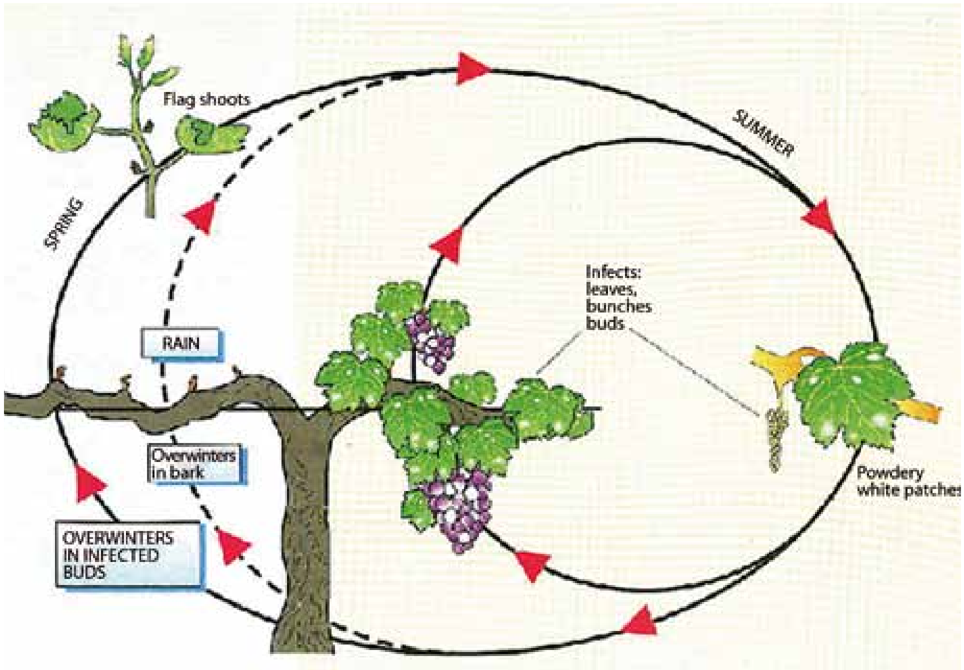
Symptoms and signs include mycelia with conidiophores and conidia on any green tissue on the vine. The mycelium can appear on both sides of the leaf and show as a white / grey powdery appearance. Severe infections will also stunt growth, cause split berries and scar canes (black, web-like in appearance).

The disease will overwinter as hyphae in developing buds during the growing season and then emerge from bud scales shortly after budburst, which will colonise new shoots.

In the past we have been able to control overwintering powdery with an application of lime sulphur (7.5L/ 100 L) at bud burst. This also helps provide good control of erinose mite. It is also extremely important to maintain a 'tight' cover spray programme after bud burst.

If you had an issue with powdery mildew last season and don't want to use lime sulphur, we would suggest two applications of sulphur at 5kg/ ha ten days apart, starting seven to 10 days after budburst. Following this, drop the rate back to 3kg/ ha.

Systemic fungicides (DMIs) such as Topas and Prostar, are commonly used at flowering and bunch closure to eradicate any powdery mildew before fruit set and veraison commences. New chemistry such as Impulse and Twist is also used to good effect as protectants against this disease.



The life cycle of Powdery mildew
Image courtesy of P. Nicholas et al (Diseases and Pests Vol. 1)

Cultural practices can also help reduce infections. Leaf plucking, trimming and shoot thinning will all help with light, spray penetration and air movement as Powdery mildew prefers dull light and calm, warm conditions for growth. The removal of Powdery mildew flag shoots in known high pressure areas of the vineyard will also be a help.

Fruit finish critical to achieving consumer expectations

With consumers becoming more discerning and competition more fierce in both local and export markets, it is imperative that growers produce and supply a top quality clean crop.

One of the major factors in achieving this quality product is fruit finish as this can greatly influences the success of the crop in the market, with consumers making buying decisions based on visual appearance.

Fruit finish can be compromised readily by a number of factors:

Weather

Extreme weather of any kind can affect the look of the fruit: from frosts causing russet on apples through to heavy dews leaving water stains in kiwifruit, excessive rain causing fruit to split, and of course, sun damaging the skin of many fruit crops.

Spray application

Using incorrect or poorly calibrated equipment for the application job or by using incorrect water rates targeted at the wrong area can also have a detrimental effect on fruit finish. Not to mention potential overuse of chemical or even failure to control the pest or disease targeted.

Chemical choice

Certain agrichemicals and nutritional products when used at the wrong time or in conjunction with other products may cause damage to some crops, while others may improve the finish. It is critical that growers seek advice on chemical choice if there is any uncertainty.

Pest and disease

Pest and disease damage has a huge part to play in fruit finish with insects leaving chewing's on the fruit and fungal and bacterial diseases causing russet, stains and marks.

Mechanical damage

Anything that comes in contact with the fruit can cause damage, from branches and other fruit in poorly pruned or over-cropped trees, to people handling the produce incorrectly leaving scuff marks or, in some cases, bruises and punctures.

Good management best prevention

However the risk of any of the above causing damage to a crop can be reduced if good management practices are in place.

From the installation of wind machines for frost protection; gibberellin products to decrease russet; product compatibility information; and staff training - there are many tools to assist today's grower achieve the top quality crop we are striving to produce.

To discuss any of the options available don't hesitate to contact your Skeltons technical advisor.

Control of cryptic pests a challenge

Cryptic pests are those that overwinter on trees, often in bark and crevasses. Scale insects and mealy bug are two of the main pests on deciduous trees.

Control of the overwintering generation greatly reduces the population build up in the coming season. Calibration of orchard spraying equipment should be completed prior to the first application of the new season and before the oil and insecticide application.

Where scale insects have been of particular concern on deciduous trees, apply a seven percent rate of lime sulphur, about seven to 14 days prior to the oil and buprofezin (Applaud or Mortar) application. The timing is important as the scale shell lifts at this time and allows better penetration of the oil and insecticide to kill the unprotected scale insect underneath. Lime sulphur also assists with control of lichen on trees.

A second insecticide with an organo-silicone should be applied just prior to flowers opening. This is particularly important for mealy bug control, as these two insecticides do not control egg stages of the lifecycle. The insecticide controls the first generation of crawlers which is occurring from later pink through bloom.

Buprofezin must not be applied to trees in bloom as it is injurious to bees and once the fruitlets are present, will leave unacceptable residues still detectable at harvest.

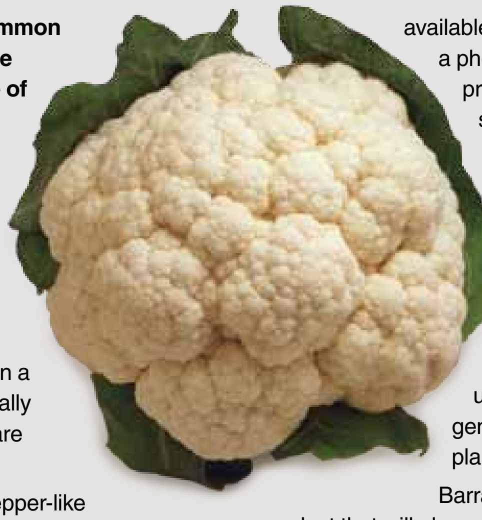
Thorough coverage with a dilute application is essential with each row receiving a double pass and being sprayed from the opposite direction. Each pass should be at 1500L per hectare as a minimum water rate.

Where oil is applied as a double pass application, rates should be reduced to one percent of Spring oil per 100L, otherwise bud damage may occur. The insecticide should be applied at the minimum label rate per hectare and is usually applied at the label rate per 100L of water.

If these pests are not adequately controlled early in the season, effective control later on is unlikely. On some crops there are currently no other allowable insecticide applications that will control these pests satisfactorily.

Downy mildew in vegetable brassicas

Downy mildew is a common disease that affects the potential performance of many infected plants, and in particular vegetable brassicas.



A downy mildew infection is first seen as a powdery grey-white mass of spores on the under-surface of the leaf, and in a field situation this is usually seen in the leaves that are closest to the ground.

Brown V shaped and pepper-like lesions are seen on the top of the leaf as the disease advances. Infection can also cause black lesions on cabbage heads and breakdown of cauliflower curds in storage. Leaves eventually turn yellow and fall if the disease is allowed to progress.

There are a number of good control options available to growers; the keys are to be vigilant and lookout for signs of change to ensure a speedy response, and to keep up with a regular spray programme.

Phosphoric acid is an extremely good option available to growers. Foscheck, a phosphorus acid based product, works by stimulating the plant's own immune response and provides a good and cost effective preventative option. Foscheck is best applied regularly at seven to 10 day intervals. It will clean up minor infections and generally promote good plant health.

Barrachlor is a chlorothalonil product that will also provide good cover and is used similarly at regular intervals to keep downy mildew out.

As with all chemistry, it is important to rotate options. If pressure is high, and infections are proving difficult to take care of, growers also have products such as the systemic Cannon applied at first sign of disease.

If you have any questions about which chemical control option will work best in your operation talk to your local Skeltons technical advisor.

Managing potato Sclerotinia rot

The fungus Sclerotinia sclerotorium (particularly stalk rot) is becoming an increasingly significant disease of potatoes in New Zealand. Until different chemical control options exist, potato growers will need sound planning and management for a successful crop.

Greater use of irrigation, dense crop canopies, and high humidity has all stimulated the increase in the spread of this disease.

Disease symptoms are expressed as soft watery lesions on plant stems in contact with the soil that later cause complete girdling and wilted plants. One or two stems per plant can affect a crop but the symptoms can often go unnoticed in less severe cases. Tuber rots rarely occur in the field but can be considerable in stored product.

Control measures must first revolve around cultural strategies. Long rotation (four years minimum with a non-host) will reduce the incidence of sclerotinia carry over. Irrigation management by reducing the period of plant wetness also helps, especially in the period of two to eight weeks after row closure. Avoid irrigation before evening during slow drying conditions.

Chemical control is only effective if fungicide is applied before the fungus attacks the plant. Currently Shirlan (fluazinam) is the only registered product in New Zealand. Further work is continuing on developing biological options but these must be proven first and will most likely be integrated with conventional chemistry in a programme.

At harvest time the potato stems shatter, releasing sclerotia from inside onto the soil so it is imperative for good long-term control that spore numbers are minimised.

Sclerotinia will continue to be a problem in wetter seasons and must be classed as a significant yield-reducing disease.

Bay advisory teams strengthened

Joe Lenaghan took over as Skeltons' horticulture technical advisor for the Poverty Bay in April this year and operates out of the Farmlands Gisborne store.

Joe is available to provide commercial growers with horticultural advice and support to grow better quality crops and a healthier bottom line

He is backed up by the Skeltons team of specialist horticulture advisors offering services based on in-depth industry knowledge and years of experience, together with the comprehensive range of competitively priced products through local Farmlands stores.

Andrew McIntosh has joined the Bay of Plenty technical advisory team and will be responsible for advising growers in and around Tauranga, Te Puna and Katikati.

He will be advising growers in the northern Bay of Plenty area and is based from the Te Puna Farmlands store.

With over 10 years in grower advisory roles around the central North Island, most recently as a territory manager for Dalton's Hortfert Plus, Andrew has a strong knowledge of the latest developments in fertilisers and foliars, including an extensive understanding of seaweed and its beneficial applications.

Andrew's horticultural advisory career has seen him working within the nursery and amenity, kiwifruit, pipfruit and avocado sectors.

Joe Lenaghan
Poverty Bay
027 555 6080

Andrew McIntosh
Bay of Plenty
027 555 4575

Skeltons expands into Northland and Pukekohe

Skeltons brand of technical advice to support commercial growers in all sectors has broadened to reach those in Pukekohe and Northland.

John Lees is based from the new Waipapa Farmlands store where he will be providing crop production advice to growers throughout the region.

John's involvement with horticulture spans over 33 years. With previous hands-on experience owning and operating Northland's largest stonefruit orchard that also boasted apples, pears, macadamia, feijoas, figs, and more, plus the oldest commercial vineyard in New Zealand, John fully appreciates the challenges facing those earning an income from horticulture.

As a former manager of the MAF / Horticulture Research Institute research orchard, then Branch Manager and Senior Field Representative of Fruitfed Supplies, he is well versed in the technical aspects of crop production and associated requirements.

More latterly as a Growsafe® trainer and Test Certifier for Agrichemicals, John has trained industry participants throughout the country and is a trainer representative on the New Zealand GrowSafe® Advisory Committee.

Steven Dass is introducing Skeltons to Pukekohe vegetable growers but probably needs little introduction himself having worked with many growers over the past 10 years in the Pukekohe region. Steven will be operating out of the Farmlands Pukekohe store.

He has considerable experience in growing and managing crops in glasshouses and outdoors, plus a comprehensive knowledge of crop areas, pests, diseases, product knowledge and new developments within this sector.

"I see my role being to ensure growers are fully aware of all products that are suitable for them and to advise them on the best way to use products in order to achieve the most cost effective results.

"I am also available for help in diagnosing pests and diseases and can conduct soil analysis to find the right solution to deal effectively with the problem."

Steven holds a Unitec Auckland, Diploma in Sustainable Horticulture and Certificate in Horticulture from Manukau Institute of Technology.

John Lees
Northland
027 612 1562

Steven Dass
Pukekohe
027 457 2742

Skeltons wins environmental award

Ian Gold, Skeltons general manager (back row centre) with other Ambassadors of Respect from countries around the world, at the 2010 World Environmental Respect Awards, held in Washington D.C., USA in July.

Skeltons has won the highest honour in the international World of Respect Awards for operating a safe, secure and environmentally responsible business.

"Environmental respect is at the forefront of every decision we make regarding purchasing, storage, distribution and use recommendations of products," says Ian Gold, Skeltons general manager.

"The future of growing is sustainability and all the impacts of product usage must be taken into account when making use recommendations. Because that is the future of the industry, it is ours as well," he says. "It's a case of us putting our money where our mouth is."

Judges from Belgium, Brazil, Colombia, Costa Rica, India, Malaysia and the US joined together to evaluate more than 70 entries from eight representative regions around the world and awarded Skeltons with the Ambassadors of Respect honour for Australasia.

Winners were selected on a range of criteria, such as product containment and safety, employee safety and training, accident prevention, plant security, emergency response readiness, and grower education on correct product use based on field-monitoring methods.

New tool for avocado growers

Sunny® has been widely used by progressive Avocado growers around the world for a number of years to improve orchard productivity and fruit quality, and now the advantages of Sunny® are available to New Zealand growers as well.

The key benefits of Sunny® are:

- increased average fruit size
- increased premium grade fruit
- reduced branch length of spring flush.

The product is applied as a foliar spray to healthy trees at flowering, targeting the start of the spring flush. It acts in the meristem (growing tip) to inhibit gibberellins that promote shoot growth, changing the balance in allocation of nutrients in favour of the buds, flowers and fruit. The result is larger fruit and a reduction in shoot length in the spring flush.

Sunny® affects only the spring flush it is applied to and does not continue to impact the growth of the tree in later flushes.

Sunny® Plant Growth Regulator

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Want more information?

Should you require further information on any articles in this newsletter, or on any other matter relating to horticulture, please contact us.

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Environmental Respect Awards — World Respect Winner 2010

Farmlands

Call one of our technical field team direct or through your local Farmlands store.

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